

REMARKS**Summary of the Office Action**

In the Office Action, a certified copy of the foreign priority document is requested.

The drawings and the specification have been objected to for minor informalities, and an abstract is required.

Claims 1-4, 6, 13, 15 and 18-20 have been objected to for minor informalities.

Claims 3, 4, 13 and 15 stand rejected under 35 U.S.C. § 112, 2nd Paragraph, as being indefinite.

Claims 9-12 stand rejected under 35 U.S.C. § 112, 2nd Paragraph, for omitting essential structure.

Claims 9, 10 and 12 stand rejected under 35 U.S.C. § 102 (b), as being anticipated by U.S. Patent No. 4,630,375 to *Spolyar*.

Claims 9, 10 and 12 stand rejected under 35 U.S.C. § 102 (b), as being anticipated by U.S. Patent No. 2,557,428 to *Grostic*.

Claims 18 and 23 stand rejected under 35 U.S.C. § 102 (e), as being anticipated by U.S. Patent No. 6,188,744 to *Shinohara*.

Claims 1-11 stand rejected under 35 U.S.C. § 103 (a), as being unpatentable over *Shinohara* in view of U.S. Patent No. 6,477,223 to *Francke*.

Claims 13 and 15 have been indicated as being allowable if rewritten to overcome the 35 U.S.C. § 112, 2nd Paragraph, rejections.

Claims 13-17 and 19-22 have been indicated as containing allowable subject matter.

Summary of the Response to the Office Action

Applicant proposes amending claims 1-4, 6, 9, 13, 15 and 18-20. Accordingly, claims 1-23 are pending for further consideration.

Certified Copy Of Foreign Priority Document

In the Office Action, a certified copy of the foreign priority document is requested.

As requested in the Office Action, a certified copy of the foreign priority document will be furnished shortly upon receipt thereof.

Objection to the Drawings and Specification

In the Office Action, the drawings and the specification have been objected to for minor informalities, and an abstract is required.

With regard to the drawings, the Office Action requests identification of various components in claims 1, 2, 5, 6 and 12. As requested, Applicant herewith provides new Fig. 2, illustrating the various components recited in claims 1, 2, 5, 6 and 12.

With regard to the specification, Applicant proposes adding specific terminology to designate the various sections of the specification, as shown above.

Accordingly, Applicant respectfully requests withdrawal of the objection to the drawings and specification.

Claim Objections

Claims 1-4, 6, 13, 15 and 18-20 have been objected to for minor informalities.

With regard to claims 1-4, 6, 13, 15 and 18-20, Applicant proposes amending the claims to correct the minor informality, as shown above. Applicant respectfully thanks the Examiner for pointing out the various informalities in the claims.

Accordingly, Applicant respectfully requests withdrawal of the objection to claims 1-4, 6, 13, 15 and 18-20.

Claim Rejections under 35 U.S.C. § 112, Second Paragraph

Claims 9-12 stand rejected under 35 U.S.C. § 112, 2nd Paragraph, for omitting essential structure.

With regard to claim 9-12, Applicant proposes amending claim 9 to correct the minor informality, as shown above.

Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 9-12 under 35 U.S.C. § 112, second paragraph.

All Claims are Allowable

In the Office Action, claims 1-11 stand rejected under 35 U.S.C. § 103 (a), as being unpatentable over *Shinohara* in view of U.S. Patent No. 6,477,223 to *Francke*. Claims 13 and 15 have been indicated as being allowable if rewritten to overcome the 35 U.S.C. § 112, 2nd Paragraph, rejections. Claims 13-17 and 19-22 have been indicated as containing allowable subject matter. Applicant traverses the rejection of claims 1-11 for the following reasons.

With regard to independent claim 1, Applicant respectfully asserts that *Shinohara* and *Francke*, viewed either singly or in combination, do not teach or suggest a system for determining and/or positioning a digital sensor of a dental X-ray apparatus, including, “an input and output device for interactive control of the system, - a first storage area, in which a digital image of an area to be examined, is saved, - a second storage area, in which a plurality of template images corresponding to different sensors of the dental X-ray apparatus are stored, and - a processing unit, which places a selected template image of a sensor simulatively on the area to be examined of the digital image such that when a real X-ray image is created, the area to be examined is depicted completely and precisely, - wherein the processing unit has means for indicating the sensor and the position of the sensor in the digital image,” as recited in independent claim 1, as amended.

Support for these features recited in claim 1 can be found at least on pages 2-6 of the originally filed specification, and in Figs. 1 and 2 of the drawings. Specifically, as shown in Figs. 1 and 2, the present invention discloses a system for determining and/or positioning digital sensor 14 of a dental X-ray apparatus. The system may include an input and output device 8 for interactive control of the system. The system may further include a first storage area 9, in which a digital image of an area to be examined, is saved, and a second storage area 10, in which a plurality of template images corresponding to different sensors of the dental X-ray apparatus are stored. A processing unit 11 may be provided for placing a selected template image of a sensor simulatively on the area to be examined of the digital image such that when a real X-ray image is created, the area to be examined is depicted completely and precisely. For the configuration described above, the processing unit may include means for indicating the sensor and the position of the sensor in the digital image.

Shinohara, as illustrated in Fig. 1 thereof discloses an X-ray CT apparatus for which a single slice (i.e. at 55 in Fig. 1) is utilized for X-raying the individual (see Col. 7:17-22).

Shinohara further discloses a display 13 for displaying an image of a human body. Contrary to the citation in the Office Action, Applicant respectfully asserts item 55 of *Shinohara* is not a sensor, but a slice position. Moreover, contrary to the citation in the Office Action, Applicant respectfully asserts the display 13 is not a template as recited in the present invention, but instead is similar to an image 4 as illustrated in Fig. 1 of the present invention.

Applicant respectfully asserts that *Shinohara* therefore does not teach or suggest a system for determining and/or positioning a digital sensor of a dental X-ray apparatus, including, “- a first storage area, in which a digital image of an area to be examined, is saved, - a second storage area, in which a plurality of template images corresponding to different sensors of the dental X-ray apparatus are stored,” as recited in independent claim 1, as amended.

Furthermore, contrary to the teachings of *Shinohara*, as now recited in independent claim 1, the present invention provides a system which includes a second storage area in which a plurality of template images corresponding to different sensors of a dental X-ray apparatus are stored, such that a selected template image of a sensor may be simulatively placed on the area to be examined of the digital image such that when a real X-ray image is created, the area to be examined is depicted completely and precisely. As correctly noted in the Office Action with regard to allowable independent claim 13, the prior art of record fails to disclose the aforementioned features of the present invention. Accordingly, in order to expedite prosecution of this application and further distinguish the present invention over the teachings of *Shinohara*, claim 1 has been amended herein to recite, “- a second storage area, in which a plurality of template images corresponding to different sensors of the dental X-ray apparatus are stored, and - a processing unit, which places a selected template image of a sensor simulatively on the area to be examined of the digital image such that when a real X-ray image is created, the area to be examined is depicted completely and precisely.”

Applicant respectfully notes that *Francke*, which discloses a conventional X-ray unit having a digital sensor, fails to overcome the aforementioned deficiencies in the teachings of *Shinohara*.

Accordingly, Applicant respectfully asserts that *Shinohara* and *Francke*, viewed either singly or in combination, do not teach or suggest a system for determining and/or positioning a digital sensor of a dental X-ray apparatus, including at least, “- a second storage area, in which a plurality of template images corresponding to different sensors of the dental X-ray apparatus are stored, and - a processing unit, which places a selected template image of a sensor simulatively on the area to be examined of the digital image such that when a real X-ray image is created, the area to be examined is depicted completely and precisely,” as recited in independent claim 1, as amended.

As pointed out in MPEP § 2131, “[t]o anticipate a claim, the reference must teach every element of the claim.” “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. Of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Moreover, as pointed out in M.P.E.P. § 2143.03, “[t]o establish prima facie obviousness of a claimed invention, all the claimed limitations must be taught or suggested by the prior art”. *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974). Since these criteria have not been met, Applicant respectfully asserts that the rejection under 35 U.S.C. § 103 (a) should be withdrawn because *Shinohara* and *Francke* do not teach or suggest each feature of independent claim 1.

In view of the above arguments, Applicant respectfully requests the rejection of independent claim 1 under 35 U.S.C. § 103 be withdrawn. Additionally, claims 2-12, which depend from independent claim 1, are allowable at least because their base claim is allowable, as well as for the additional features recited therein.

Independent claim 9

In the Office Action, claims 9, 10 and 12 stand rejected under 35 U.S.C. § 102 (b), as being anticipated by U.S. Patent No. 4,630,375 to *Spolyar*. Claims 9, 10 and 12 also stand rejected under 35 U.S.C. § 102 (b), as being anticipated by U.S. Patent No. 2,557,428 to *Grostic*. Claims 13 and 15 have been indicated as being allowable if rewritten to overcome the 35 U.S.C. § 112, 2nd Paragraph, rejections. Claims 13-17 and 19-22 have been indicated as containing allowable subject matter. Applicant traverses the rejection of claims 9, 10 and 12 for the following reasons.

With regard to independent claim 9, Applicant respectfully asserts that *Spolyar* and *Grostic* do not teach or suggest a template for specifying a digital X-ray sensor, the template including, “a shape and size of an X-ray image in the form of a digital X-ray sensor, said size and shape of said template being scaled up by a factor corresponding to the X-ray image for displaying said X-ray image,” as recited in independent claim 9, as amended.

Applicant respectfully asserts that claim 9 is allowable at least for the reasons presented above for the allowance of independent claim 1, and the additional features recited therein. In the interest of avoiding redundant arguments, the arguments presented above for the allowance of claim 1 are not repeated herein.

Applicant further respectfully notes that as shown in Fig. 4 of *Spolyar*, there is disclosed an apparatus for gauging and determining the spatial or angular position of the axis of an X-ray source relative to a patient’s head. Further, as shown in Fig. 1 of *Grostic*, there is disclosed an apparatus for determining displacements in X-ray images.

Contrary to the teachings of *Spolyar* and *Grostic*, the present invention as recited in independent claim 9 discloses a template for specifying a digital X-ray sensor. In order to account for variations in the size of an X-ray image, the template which has the shape and size of an X-ray image in the form of a digital X-ray sensor, may have its size and shape scaled up by a factor corresponding to the X-ray image for displaying said X-ray image. Applicant respectfully asserts that *Spolyar* and *Grostic* teach no such template having the shape and size of an X-ray image in the form of a digital X-ray sensor, or the template having its size and shape scaled up by a factor corresponding to the X-ray image for displaying said X-ray image.

Accordingly, Applicant respectfully asserts that *Spolyar* and *Grostic* do not teach or suggest a template for specifying a digital X-ray sensor, the template including, “a shape and size of an X-ray image in the form of a digital X-ray sensor, said size and shape of said template being scaled up by a factor corresponding to the X-ray image for displaying said X-ray image,” as recited in independent claim 9, as amended.

In view of the above arguments, Applicant respectfully requests the rejection of independent claim 9 under 35 U.S.C. § 102 be withdrawn. Additionally, claims 11 and 12, which depend from independent claim 9, are allowable at least because their base claim is allowable, as well as for the additional features recited therein.

Independent claim 18

In the Office Action, claims 18 and 23 stand rejected under 35 U.S.C. § 102 (e), as being anticipated by U.S. Patent No. 6,188,744 to *Shinohara*. Claims 13 and 15 have been indicated as being allowable if rewritten to overcome the 35 U.S.C. § 112, 2nd Paragraph, rejections. Claims 13-17 and 19-22 have been indicated as containing allowable subject matter. Applicant traverses the rejection of claims 18 and 23 for the following reasons.

With regard to independent claim 18, Applicant respectfully asserts that *Shinohara* does not teach or suggest a method, for creating a number of partial images using a plurality of sensors, comprising “a first step in which several areas to be X-rayed are selected from an image, and a second step in which there is effected automatic selection and display of at least one sensor suitable for creating a respective image,” as recited in independent claim 18, as amended.

Applicant respectfully asserts that claim 18 is allowable at least for the reasons presented above for the allowance of independent claims 1 and 9, and the additional features recited therein. In the interest of avoiding redundant arguments, the arguments presented above for the allowance of claims 1 and 9 are not repeated herein.

In view of the above arguments, Applicant respectfully requests the rejection of independent claim 18 under 35 U.S.C. § 102 be withdrawn. Additionally, claims 19, 20 and 23, which depend from independent claim 18, are allowable at least because their base claim is allowable, as well as for the additional features recited therein.

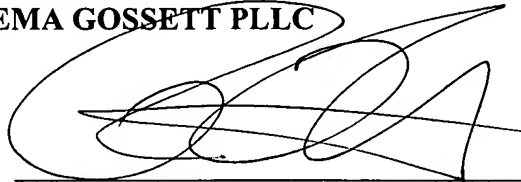
CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration and the timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of the response, the Examiner is invited to contact the Applicant's undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 04-2223. If a fee is required for an extension of time under 37 C.F.R. §1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

DYKEMA GOSSETT PLLC

A handwritten signature in black ink, appearing to be 'Adesh Bhargava', written over a horizontal line.

By:

Adesh Bhargava

Reg. No. 46,553

Dated: May 14, 2004

DYKEMA GOSSETT PLLC
1300 I Street, N.W., Suite 300 West
Washington, D.C. 20005
(202) 906-8696